

**EFFECTS OF ATTITUDES,
JOB CHARACTERISTICS AND EXTERNAL MARKET ON EMPLOYEE
TURNOVER: A STUDY OF MALAYSIAN INFORMATION TECHNOLOGY
WORKERS**

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ABSTRACT

This study investigated the influence of job satisfaction, organizational commitment, job characteristics, perceived job alternatives and perceived competitiveness of pay to Malaysian IT workers turnover intention. The results showed that job satisfaction was found to be the predictor of turnover intention rather than organizational commitment and that job satisfaction itself is function of perceived competitiveness of pay and job feedback. The findings suggest IT and HR managers should focus on job satisfaction, provision of competitive pay packet and constant job feedback to IT workers in order to overcome the pressing issue of IT workers turnover.

INTRODUCTION

Minimizing employee turnover rate is one of the most important tasks of managers. This is because a high turnover rate among others implies that the organizations concerned are probably incurring high costs of operations. The costs of employee turnover are due to:

1. the cost of retaining workers
2. the costs of training and development
3. loss of business and increased business risks.

Therefore, companies that are not able to reduce their employee turnover figure will likely lose their competitiveness in the long run.

The main objective of this study is to investigate how factors such as attitudes, job characteristics and external market influence employee turnover.

Why the Information Technology Industry?

The Information Technology (IT) industry worldwide is one of the fastest growing sectors. In the current digital era, lots of IT related job opportunities are created by local firms, multinational corporations and in an end-user support environment, systems integration or IT vendor environment. Moreover, with the advent of 'globalization', multinational corporations have transitioned their operations and technical hubs or business support centers in different parts of the world. These have resulted in sudden job openings being created in the host countries leading to attractive offers being made to practicing IT specialist.

Scope of Study

The study was conducted on IT workers in Malaysia. It includes the IT work forces in local companies and affiliates of multi-national corporations in Malaysia, covering job

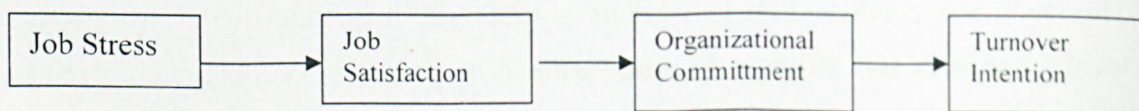
classifications from technician/executive, supervisor, manager and senior manager/director levels. It excludes Malaysian IT workforce who work overseas.

Due to time constraint, this study did not measure actual turnover. Instead, the study only measured turnover intention and tests its correlation with other constructs, namely, organizational commitment, job satisfaction, job characteristics, perceived competitiveness of pay and perceived job alternatives. In any case, turnover intention is the cognitive manifestation of the turnover decision behavior. There are also considerable studies that support turnover intention as the most important and immediate antecedent to turnover decision (Mobley, Griffeth, Hand and Meglino, 1979; Mitchel, 1981; Bluedorn, 1982).

Past studies on Turnover

Past studies have consistently shown that individuals who were highly committed to their organization would be less likely to think about leaving the organization (Iverson & Buttigieg, 1999; Jaros, 1997). This attachment to the organization is generally called organizational commitment. Meyer and Allen (1997) suggested that a "committed employee is one who will stay with the organization through thick and thin, attends work regularly, puts in a full day, protects company assets and who shares company goals". Organizational commitment developed when an employee's need and desires were satisfied in the organization and their skills were being utilized. In contrast to job satisfaction that is linked to the job, organizational commitment emphasizes links to the organization. Organizational commitment is also relatively more stable and developed over time as compared to job satisfaction, which may fluctuate day-to-day (Mowday, Porter and Steers, 1982; Thatcher, Stepina and Boyle, 2003).

The causal study of job satisfaction, organizational commitment and stress on turnover intentions (Elangovan, 2001) yielded support to the following strong causal relationships;



Only organizational commitment directly affects turnover intentions. Organizational commitment has a very strong negative effect on turnover intentions. This means the lower the organizational commitment, the higher the propensity for an employee to leave. Job satisfaction and job stress did not directly affect turnover intention but only through organizational commitment. The implication is that any intervention aimed at affecting turnover needs to focus more on influencing organizational commitment, rather than job satisfaction. Other studies which showed similar relationships include Igbaria & Guimaraes (1993) and a study conducted by Healthcare Register (2001).

Griffeth, Hom and Gaertner (2000) analyzed five hundred correlations from 42 studies. This meta-analysis concluded that demographic factors such as gender and race were modestly influential. In respect of overall job satisfaction, job facets were found to be better turnover predictors and overall job satisfaction was the best predictor of turnover. A meta-analysis of turnover intention among accountants by Dole and Schroeder (2001) provided similar findings with Griffeth et al. (2000). Chiu and Francesco (2002) investigated the relationships between turnover intention and positive affectivity and negative affectivity, and the mediating roles of job satisfaction and affective commitment in those relationships.¹ They found turnover intention to be negatively related to positive affectivity, job satisfaction and affective commitment. Job satisfaction and affective commitment mediate the relationship between positive affectivity and turnover intention. However, the results indicated no significant relationship between negative affectivity and turnover intention.

A qualitative study of turnover intention of graduates in their early career (Jane S. & David G. 2001) showed that the most important group of factors influencing the level of commitment was whether the 'pre-join' expectations of the job have been met. These expectations were in respect to the kind of job they were placed, career management helps given and training and development they received. The second group of factors was culture and climate of the organization concerning whether they felt they fitted in and the

¹ Positive affectivity is an individual's trait that reflects positive emotionality and self-concept, a degree that he/she is predisposed to be happy. Negative affectivity is an individual's trait that describes the individual's tendency to experience a variety of negative emotions, a degree to be easily distressed, agitated, upset, pessimistic and dissatisfied.

quality of relationship they enjoyed at work. The third group of factors was whether they can balance work/home life harmony, recognition and reward for achievement and career progression.

Research Hypotheses

Our study is based on the model proposed by Thatcher, Stepina and Boyle (2003) shown figure 1 below:

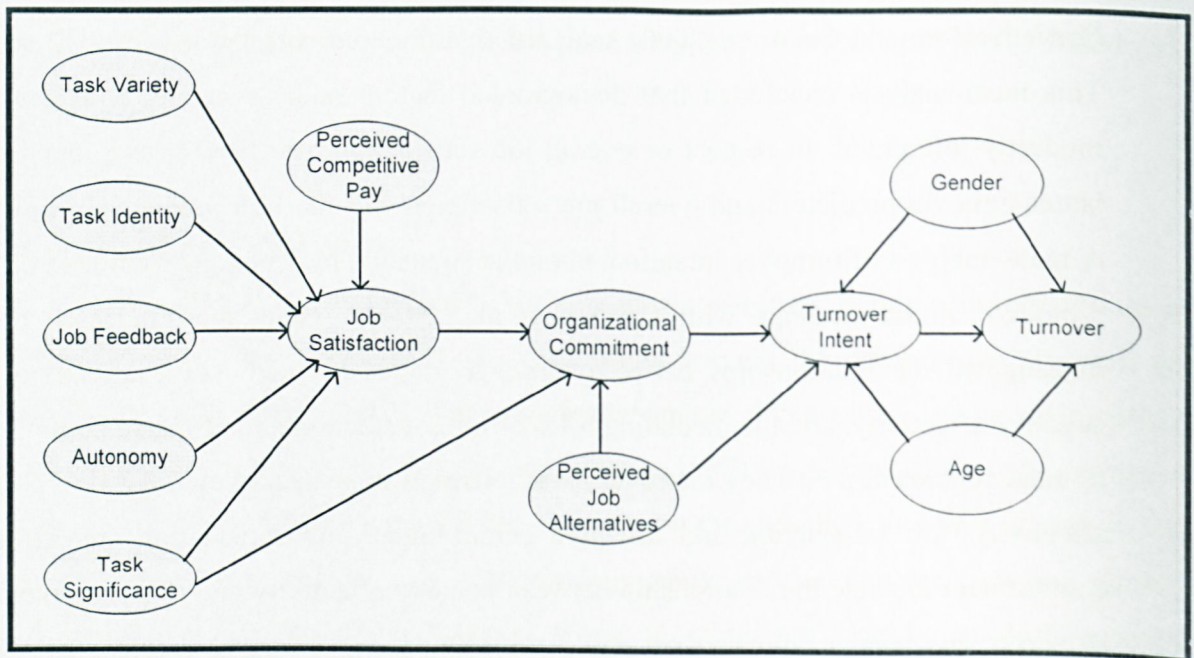


Figure 1 - Theoretical model of IT Worker Turnover by Thatcher, Stepina and Boyle (2003).

This model suggests that organizational commitment mediates the influences of job satisfaction, job characteristics and perceived competitiveness of pay on turnover intention. Perceived job alternatives directly affect organizational commitment and turnover intention. Turnover intention mediates the relationship between organizational commitment and actual turnover.

This model shows that organizational commitment is the most important antecedent to turnover intention. Organizational commitment is the enduring feeling of a worker about

shared norms and his/her willingness to exert effort on behalf of the organization. As organizational commitment is relatively enduring, it mediates the influence of other less stable attitudes such as job satisfaction, beliefs about job characteristics on turnover intention (Thatcher et al. 2003).

Organizational Commitment

Researches suggest that organizational commitment inversely affects turnover intention. Worker who is more committed to his organization is less likely to turnover than worker who is less committed to his organization. Hence,

Hypothesis A – Organizational Commitment will demonstrate a negative relationship with turnover intention.

Job Satisfaction

Job satisfaction refers to a general attitude toward one's job; the difference between the amount of rewards workers receive and the amount they believe they should receive (Robbins 1979, p 47). Recent research shown job satisfaction influences organizational commitment and has mediated effect on turnover intention (Griffeth et al. 2000). Worker with higher job satisfaction reasonable has higher organizational commitment. Hence

Hypothesis B – Job satisfaction will demonstrate a positive relationship with organizational commitment.

Job Characteristics

Job autonomy, job identity, task variety, job significance and job feedback have direct effect on job satisfaction (Mathieu and Zajac 1990). Hence,

Hypothesis C – Job characteristics will demonstrate a positive relationship with job satisfaction.

Task Significance

Task significance is the degree to which the job has a substantial impact on the lives or work of other people (Robbins 1979). Worker feels greater task significance if his job has greater need to comply with the organizational norms and willing to exert extra effort to complete his tasks. Thus, worker who feels task significance in his job may express more organizational commitment. Hence,

Hypothesis D – Task significance will demonstrate a positive relationship with organizational commitment.

Perceived Competitiveness of Pay

Worker feels valued by his organization when he perceives his pay as competitive or higher than external market. When he feels valued by organization, he may express more job satisfaction. Hence,

Hypothesis E – Perceived competitiveness of pay will demonstrate a positive relationship with job satisfaction.

Perceived Job Alternatives

Perceived job alternatives refers to the worker's belief of getting a similar job elsewhere with the similar compensation in other organization. When a worker perceives he has job alternatives elsewhere, his commitment towards the current organization decreases and has higher turnover intention (Mobley, Griffeth, Hand and Meglino 1979). Hence,

Hypothesis F – Perceived job alternatives will demonstrate a negative relationship with organizational commitment.

Hypothesis G - Perceived job alternatives will demonstrate a positive relationship with turnover intention.

Demographic

Although Griffeth et al. (2000) meta-analysis found demographic variables are weak predictors of turnover intention, but Griffeth et al. remained cautious that these predictors

could vary widely across situations and populations. Research found there was gender difference in turnover intention in IT workspace (Igbaria and Baroudi 1995). Hence,

Hypothesis H – Female IT workers will demonstrate higher turnover intention than male IT workers.

Hypothesis I – Older workers will demonstrate lower turnover intention than younger workers.

Research Methodology

The study employed self-administered questionnaires which were sent out on a convenient sampling basis. The questionnaire was emailed to IT professionals who were known to one of the authors. They were also requested to forward the questionnaire to their acquaintances who were also IT personnel. Hardcopies of the questionnaires were also distributed to companies in the banking, telecommunications, systems integration/IT vendors and oil and gas industries.

The measures of turnover intention, organizational commitment, job satisfaction, perceived competitiveness of pay, perceived job alternatives and job characteristics, were adopted from Thatcher et al. (2003) with a very minor modification to only one question (replacing the word 'the state' with 'company').

The data collected was analyzed using SPSS version 10.

Research findings

The survey generated 87 responses. Table 1 – 5 presents some demographic information of respondents:

Table 1: Age

Age	Frequency	Percentage	Cumulative Percentage
20 – 29	12	13.8	13.8
30 – 39	72	82.8	96.6
40 – 49	3	3.4	100
Above 50	0	0	100

Total	87	100	
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Table 2: Gender

Gender	Frequency	Percentage	Cumulative Percentage
Female	21	24.1	24.1
Male	66	75.9	100
Total	87	100	

Table 3: Educational Background

Educational Background	Frequency	Percentage	Cumulative Percentage
Diploma	9	10.3	10.3
Bachelor’s Degree	69	79.4	89.7
Master’s Degree	9	10.3	100
Doctorate	0	0	100
Total	87	100	

Table 4: Job Classification

Job Classification	Frequency	Percentage	Cumulative Percentage
Executive / Technician	48	55.2	55.2
Supervisor	9	10.3	65.5
Manager	27	31.1	96.6
Senior Manager / Director	3	3.4	100
Total	87	100	

Table 5: Job Tenure

Job Tenure	Frequency	Percentage	Cumulative Percentage
Less than 2 years	18	20.7	20.7

2 – 5 years	33	37.9	58.6
5 – 10 years	33	37.9	96.6
10 – 20 years	3	3.4	100
Total	87	100	

Reliability Test of Measures

Reliability tests were performed to all measures used in the questionnaire. The following table shows the reliability coefficients (alpha) for each group of measures.

Measure	Reliability Coefficients (Alpha)
Turnover Intention (2 questions)	0.9382
Organizational Commitment (9 questions)	0.9136
Job Satisfaction (2 questions)	0.8901
Perceived Competitiveness of Pay (2 questions)	0.7240
Perceived Job Alternatives (3 questions)	0.6644
Job Autonomy (3 questions)	0.6180
Job Feedback (3 questions)	0.9132
Task Variety (3 questions)	0.8871
Task Significance (3 questions)	0.8186
Task Identity (3 questions)	0.7933

Table 6 - Results of Reliability Tests

Majority of the measures has high reliability coefficients (alpha) ranging from 0.7240 to 0.9382. The measures having reliability coefficients (alpha) lower than 0.7000 were Perceived Job Alternatives and Job Autonomy.

Testing of the Hypotheses

In the testing of Correlation, all Likert Scale points of all questions under a particular measure were summed up to produce a new variable. For example, Likert scale point of

question 1 and question 2 in the Turnover Intention section in the questionnaire were summed up to produce a new variable called Turnover Intention. This new variable represented a respondent's turnover intention. The lower the sum, the higher the intention to turnover of a respondent was. The following measures were derived from the sum of the Likert scale points of the respective questions.

- 1 Turnover Intention
- 2 Organizational Commitment
- 3 Job Satisfaction
- 4 Perceived Competitiveness of Pay
- 5 Perceived Job Alternatives
- 6 Job Autonomy
- 7 Job Feedback
- 8 Task Variety
- 9 Task Significance
- 10 Task Identity

Other than the new variables listed above, the value of Job Autonomy, Job Feedback, Task Variety, Task Significance and Task Identity were added up to generate a new variable to represent Job Characteristics. Correlation analysis was performed to test the correlations between all the variables. Findings are presented below in Table 7:

		TOI	OC	JS	PCP	PJA	AUT	JF	TV	TS	TI	TJC
TOI	Pearson Correlation	1.000										
	Sig. (2-tailed)											
OC	Pearson Correlation	-.491**	1.000									
	Sig. (2-tailed)	.000										
JS	Pearson Correlation	-.714**	.576**	1.000								
	Sig. (2-tailed)	.000	.000									
PCP	Pearson Correlation	-.417**	.247*	.442**	1.000							
	Sig. (2-tailed)	.000	.021	.000								
PJA	Pearson Correlation	.059	.150	.053	-.066	1.000						
	Sig. (2-tailed)	.586	.167	.623	.541							
		TOI	OC	JS	PCP	PJA	AUT	JF	TV	TS	TI	TJC
AUT	Pearson Correlation	.269*	-.300**	-.293**	-.069	.047	1.000					
	Sig. (2-tailed)	.012	.005	.006	.527	.666						
JF	Pearson Correlation	.244*	-.351**	-.473**	-.266*	.072	.493**	1.000				
	Sig. (2-tailed)	.023	.001	.000	.013	.510	.000					
TV	Pearson Correlation	-.081	-.334**	-.087	-.034	.044	.720**	.296**	1.000			
	Sig. (2-tailed)	.456	.002	.425	.753	.688	.000	.005				
TS	Pearson Correlation	-.016	-.566**	-.172	-.134	-.032	.492**	.430**	.538**	1.000		
	Sig. (2-tailed)	.884	.000	.111	.216	.767	.000	.000	.000			
TI	Pearson Correlation	.030	-.158	-.137	.041	-.034	.363**	.515**	.228*	.378**	1.000	
	Sig. (2-tailed)	.780	.144	.207	.709	.756	.001	.000	.034	.000		
TJC	Pearson Correlation	.113	-.447**	-.307**	-.119	.027	.817**	.736**	.751**	.742**	.680**	1.000
	Sig. (2-tailed)	.298	.000	.004	.271	.803	.000	.000	.000	.000	.000	

Table 7 - Results of Correlation Analysis.

TOI - Turnover Intention, Satisfaction,	OC - Organizational Commitment,	JS - Job
PCP - Perceived Competitiveness of Pay, Autonomy,	PJA - Perceived Job Alternatives,	AUT - Job
JF - Job Feedback, Significance,	TV - Task Variety,	TS - Task
TI - Task Identity,	TJC - Over All Job Characteristics	

- ** Correlation is significant at the 0.01 level (2-tailed)
- * Correlation is significant at the 0.05 level (2-tailed)

Table 7 - Results of Correlation Analysis.

TOI - Turnover Intention,	OC - Organizational Commitment,	JS - Job Satisfaction,
PCP - Perceived Competitiveness of Pay,	PJA - Perceived Job Alternatives,	AUT - Autonomy,
JF - Job Feedback,	TV - Task Variety,	TS - Task Significance,
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** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Relationship Between Task Significance and Organizational Commitment (Hypothesis D)

The correlation analysis between Task Significance and Organizational Commitment showed that Task Significance was positively related Organizational Commitment. The correlation coefficient was +0.566 significant at the 0.01 level.

Thus, Hypothesis D is supported.

Relationship Between Perceived Competitiveness of Pay and Job Satisfaction (Hypothesis E)

The correlation analysis between Perceived Competitiveness of Pay and Job Satisfaction showed that Perceived Competitiveness of Pay was positively related Job Satisfaction. The correlation coefficient was +0.442 significant at the 0.01 level.

Thus, Hypothesis E is supported.

Relationship Between Perceived Job Alternatives and Organizational Commitment (Hypothesis F)

The correlation analysis between Perceived Job Alternatives and Organizational Commitment showed no relationship between them.

Thus, Hypothesis F is rejected.

Relationship Between Perceived Job Alternatives and Turnover Intention (Hypothesis G)

Relationship Between Task Significance and Organizational Commitment (Hypothesis D)

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Thus, Hypothesis F is rejected.

Relationship Between Perceived Job Alternatives and Turnover Intention (Hypothesis G)

Age Group	Mean (Lower mean indicate Higher Turnover Intention)	Standard Deviation	Significant
20 to 29 years	5.20	1.52	0.02
30 to 39 years	7.21	2.10	
40 to 49 years	6.00	.00	
All Groups	6.83	2.11	

The mean difference is significant at the 0.05 level.

Table 9 - Means of Turnover Intention Score According to Age Group

Table 10 below depicts the result of multiple comparison between different age groups.

(I) AGE	(J) AGE	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 (20 to 29 yrs)	2	-2.01	.56	.003	-3.41	-.60
	3	-.80	1.26	.817	-3.93	2.33
2 (30 to 39 yrs)	1	2.01	.56	.003	.60	3.41
	3	1.21	1.17	.590	-1.71	4.13
3 (40 to 49 yrs)	1	.80	1.26	.817	-2.33	3.93
	2	-1.21	1.17	.590	-4.13	1.71

* The mean difference is significant at the .05 level.

Table 10 - Multiple Comparison between Age Groups

Anova analysis showed significant different ($p < 0.05$) in turnover intention between age groups. The age group of 20 to 29 years old showed significant ($P < 0.05$) higher turnover intention as compared to 30 to 39 years. However, this was true when comparing with the oldest age group, i.e. 40 to 49 years old.

Thus, Hypothesis I is rejected.

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1	Regression	125.957	1	125.957	24.441	.000 ^a
	Residual	438.043	85	5.153		
	Total	564.000	86			
2	Regression	186.434	2	93.217	20.739	.000 ^b
	Residual	377.566	84	4.495		
	Total	564.000	86			
a Predictors: (Constant), Job Feedback						
b Predictors: (Constant), Job Feedback, Competitiveness of Pay						
c Dependent Variable: Job Satisfaction						

Table 12 - Results of Regression Analysis on Job Satisfaction - ANOVA

Organizational Commitment

The independent variables for Organizational Commitment are Job Satisfaction, Perceived Competitiveness of Pay, Perceived Job Alternatives, and Task Significance. The linear regression analysis produced a model with Competitiveness of Pay and Job Satisfaction as predictors of Organizational Commitment. Table 13 and Table 14 show the regression analysis results.

The Task Significance and Job Satisfaction explained 50.7 percent variation of Organizational Commitment.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538 ^a	.289	.281	7.94
2	.720 ^b	.519	.507	6.57
a Predictors: (Constant), Task Significance				
b Predictors: (Constant), Task Significance, Job Satisfaction				

Table 13 - Results of Regression Analysis on Organizational Commitment - Model Summary

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2104.114	1	2104.114	33.373	.000 ^a
	Residual	5169.921	82	63.048		

2	Residual	438.043	85	5.153		
	Total	564.000	86			
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Summary of Test Results

The results of correlation analysis are summarized in Figure 2 below.

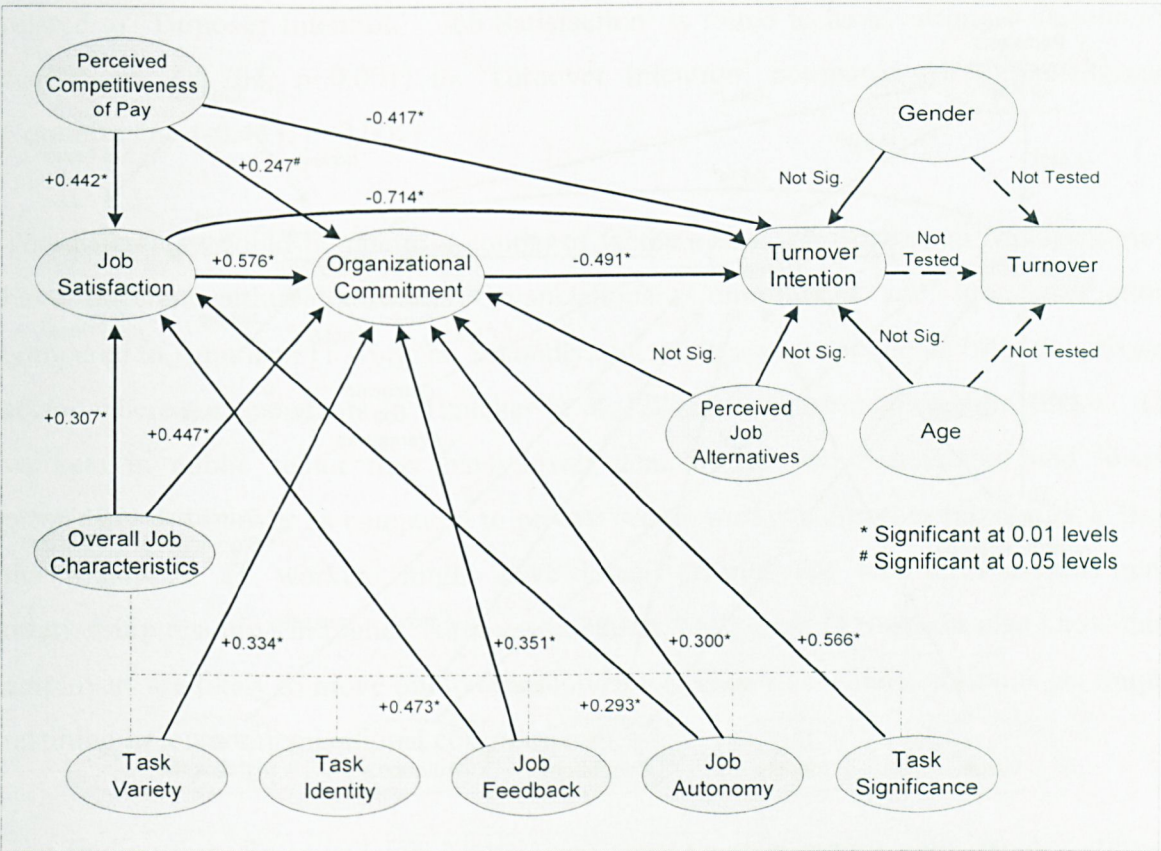
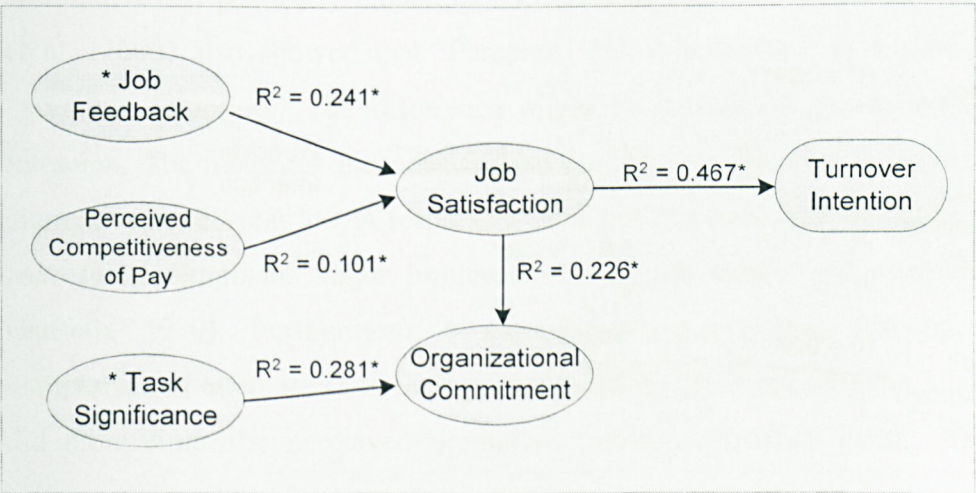


Figure 2 - Results of Correlation Analysis

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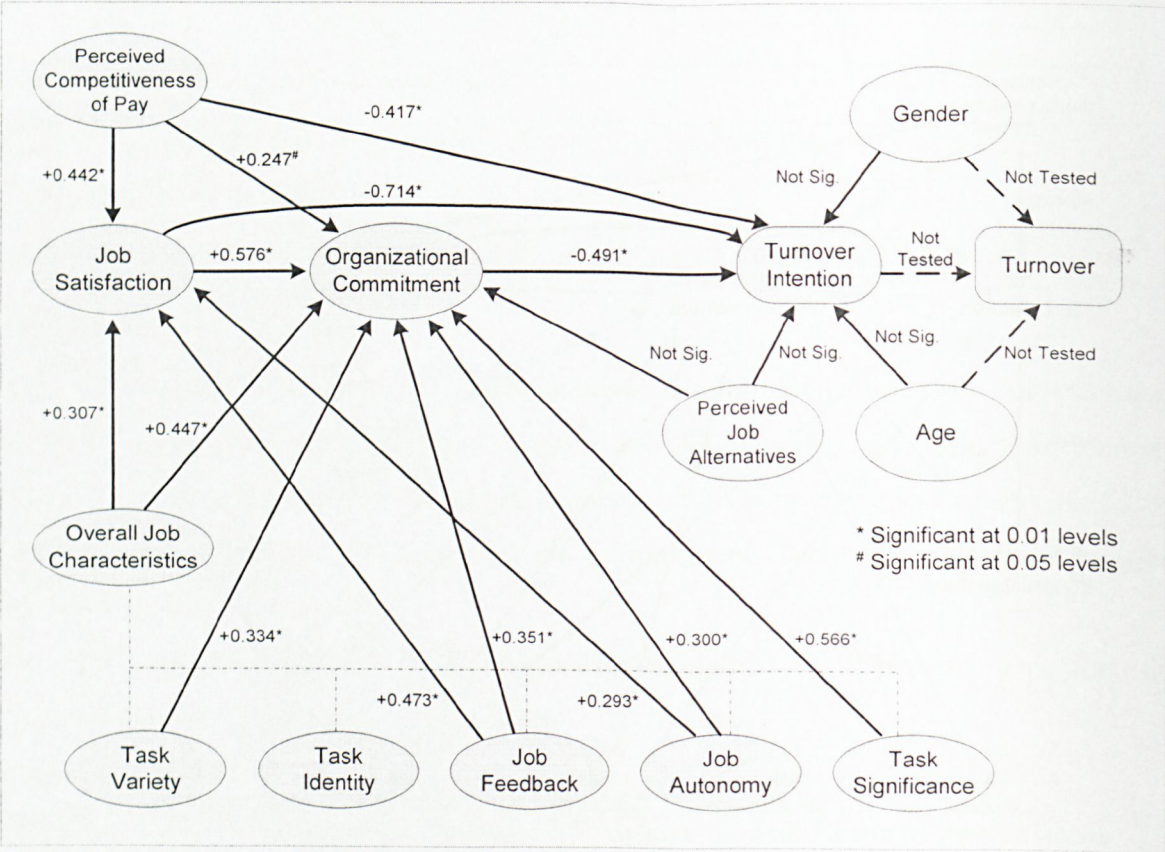
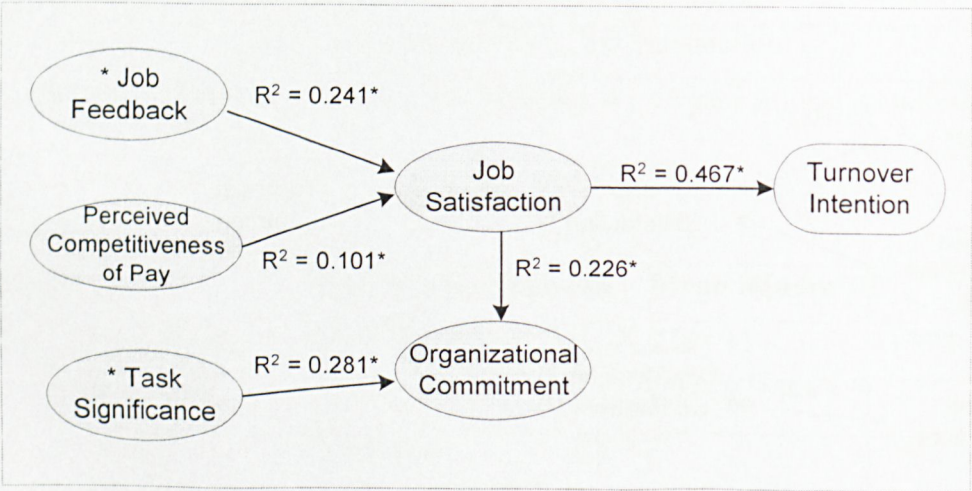


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In this study, both 'Job Satisfaction' and 'Organizational Commitment' are negatively related to 'Turnover Intention'. 'Job Satisfaction' is found to have stronger correlation coefficients (-0.704 , $p < 0.001$) to 'Turnover Intention' compared to 'Organizational Commitment' (-0.453 , $p < 0.001$).

The differences could be due to a couple of factors. First, IT workers in Malaysia may have different attitudes towards Organizational Commitment and Job Satisfaction compared to American IT workers. Secondly, our study uses respondents from the private sector whereas respondents in Thatcher et al. (2003) were from the public sector. IT workers in public sector may have lower demand for Job Satisfaction and lower propensity to turnover as compared to private sector workers. Another possibility is that the Malaysian IT workers might have lower priority for long-term employment relationship resulting in higher Turnover Intention. Malaysian IT workers also know that employers are likely to move out to other lower cost countries when conditions get tough resulting in lower organizational commitment.

The finding that 'Perceived Job Alternatives' have no relationship with 'Organizational Commitment' and 'Turnover Intention' also deserves attention. This is because it is in direct contrast to the findings in Thatcher et al. (2003) where 'Perceived Job Alternatives' is positively related to 'Turnover Intention'. The meta-analysis by Griffeth et al. (2000) also showed that 'Perceived Job Alternatives' is a modest predictor of 'Turnover Intention'. The difference might be caused by the measures of Turnover Intention. The measures did not assess respondent's subjective comparison of their job alternatives to current job. A respondent who has not conducted an active job search may have just a simplistic, vague impression of the job market and alternatives (Steel and Griffeth, 1989). Furthermore, a complex scale assessing respondents' subjective comparison of alternatives to their present position predicted turnover slightly better than did more simplistic perceived-alternative measures (Griffeth et al., 2000). Moreover,

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The finding that 'Perceived Job Alternatives' have no relationship with 'Organizational Commitment' and 'Turnover Intention' also deserves attention. This is because it is in direct contrast to the findings in Thatcher et al. (2003) where 'Perceived Job Alternatives' is positively related to 'Turnover Intention'. The meta-analysis by Griffeth et al. (2000) also showed that 'Perceived Job Alternatives' is a modest predictor of 'Turnover Intention'. The difference might be caused by the measures of Turnover Intention. The measures did not assess respondent's subjective comparison of their job alternatives to current job. A respondent who has not conducted an active job search may have just a simplistic, vague impression of the job market and alternatives (Steel and Griffeth, 1989). Furthermore, a complex scale assessing respondents' subjective comparison of alternatives to their present position predicted turnover slightly better than did more simplistic perceived-alternative measures (Griffeth et al., 2000). Moreover, dissatisfied workers may quit the job without accepting a new job beforehand or even

Conclusions

The main conclusion and theoretical implication of this study is that 'Job Satisfaction' and 'Organizational Commitment' can be independent determinant variables for 'Turnover Intention'. This is a variant of the model suggested by Thatcher et al. (2003) which suggested that only 'Organizational Commitment' is related to 'Turnover Intention'. For the practitioners, especially Malaysian IT managers and also IT managers in Asia, this study provides useful information in drawing up human resource plans in order to reduce turnover problems.

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